Cost-Effectiveness of Diabetes Self-Management Education and Support in the Community: Projections from a Randomized Controlled Trial

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To impact clinical and behavioral diabetes care, understanding the cost-effectiveness (CE) of diabetes self-management education and support (DSME/S) in community settings is critical. We aimed to determine the long-term CE of 2 DSME/S modalities (Community Health Worker (CHW) vs. CHW + Peer Leader (PL), compared to enhanced usual care (EUC), in reducing risk of diabetes complications in Hispanic adults with type 2 diabetes (diabetes) in metro-Detroit. CE analyses were based on empirical outcome data from a randomized controlled effectiveness trial. Eligible subjects were recruited from one Federally Qualified Health Center and randomized to 1) 6 months of CHW-led DSME + 12 months of CHW-led telephone outreach, 2) 6 months of CHW-led DSME+ 12 months of PL-led weekly group sessions with telephone outreach, or 3) EUC. We used the validated Michigan Model for Diabetes to estimate the CE of the 2 DSME/S modalities compared to EUC over a 10-year simulation time horizon, discounting costs and benefits at 3% annually. Trial-based costs and outcomes were used; other data regarding costs, disease progression, mortality, and utilities were from published literature. From a healthcare sector perspective, CHW+PL was associated with lower costs ($76,599 vs. $77,203 in CHW and $76,779 in EUC) and increased health benefits (quality-adjusted life-years (QUALY): 5.137 vs. 5.108 in CHW and EUC) compared to CHW and EUC, respectively, in the model time horizon. CHW was associated with higher costs but yielded similar QALYs compared to EUC. The greater intervention costs of CHW + PL were completely or substantially offset by savings arising from averted diabetes complications compared to CHW or EUC. Using CHW+PL for DSME/S appears to be a sound investment and may be cost-saving for Hispanic adults with diabetes in metro-Detroit.